

# PATENT SPECIFICATION

887,811

DRAWINGS ATTACHED.



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## COMPLETE SPECIFICATION.

### Improvements relating to Washing Machines.

I, WILHELM LEPPER, a German Citizen, of Berghaus Heckenfels, Honnef am Rhein, Germany, trading as TRANSFORMATOREN-WERK AUGUST LEPPER, of 68 Postfach, Honnef A. Rhein, Western Germany, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to washing machines employing pumps for the soap suds, especially automatic washing machines, and has for its object to provide an arrangement which simplifies and facilitates cleaning of the filter in the outlet leading from the washing drum container to the suds pump, so that such cleaning can be carried out by a housewife without the aid of skilled personnel.

It is a further object of this invention to provide an arrangement whereby work can be carried out so simply and cleanly that no washing suds or washing liquids run out to make other cleaning operations necessary or to wet the machine frame so that it might in time rust.

According to the present invention a washing machine comprises a pump for the suds, a filter located at the outlet from the washing drum container, and a readily detachable filter housing of rubber or like flexible material in the connection between the outlet of the washing drum container and the suds pump, said housing after being detached from the drum outlet and pulled downwards to expose the filter having a water holding capacity exceeding the contents of the riser pipe of the suds pump.

It is also expedient to arrange that the filter housing is secured to the outlet connection of the washing drum container by

means of a simple hose clip with a lever locking device so as to be readily detachable.

An embodiment of the invention will now be described with reference to the accompanying drawings in which:—

Fig. 1 is a schematic, partly cut-away rear view of parts of the machine and its associated outlet; and

Fig. 2 shows the same parts in section taken on a line through the machine shown in Fig. 1.

Referring to the drawings, the machine comprises a panel 1 and an outer drum 2 provided with an outlet connection 3 which is connected with a filter housing 4 by means of a hose clip 5. The filter housing 4 leads via point 6 to a suds pump 7 which is arranged to be driven by an electric motor 8. The machine is also provided with a base plate 9 to which the motor 8 is secured by means of an angle bracket. A riser pipe 10 of the suds pump 7 opens into an overflow at 11. The pipe 10 may for example, consist of a rubber tube. A filter 12 is accommodated inside the filter housing 4 and a pipe 4a connects the filter housing 4 with the suds pump 7 the housing for which can be made integrally with the filter housing 4.

In addition, an emptying pipe connection is provided, but it need not be used during cleaning of the filter 12.

For an explanation of the mode of operation of the arrangement hereinbefore described reference is made to Fig. 2. In operation, after the machine has been emptied, for example, by means of the suds pump 7, and after the drive motor 8 has been switched off, the contents of the riser pipe 10 flow back through the suds pump 7. According to the law governing communicating pipes a water level is then formed in

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the filter housing 4 which is indicated by the broken line. In order to clean the filter housing 4 the clip 5 is first opened. The filter housing is then bent downwards together with the connection piece 4a until the filter 12 can be removed. This position is indicated by broken lines in Fig. 2. The water level then rises in the filter housing 4, but does not overflow to the outside as the holding capacity of the filter housing is such that when one corner of the latter touches the bottom of the frame the water does not overflow, provided of course that the water which is present is only that which has flowed back from the riser pipe 10.

The filter housing 4 can therefore be cleaned and replaced without causing the water remaining in the riser pipe to overflow and penetrate into the machine frame.

After the filter 12 has been cleaned, the clip 5 is secured again simply by turning a lever-operated bolt and the original water level in the filter housing is restored. This can do no harm, however, as the filter housing itself and the riser pipe 10 are made of rust-proof material. The pump should, of course, be made from a rust-proof material. Only if the machine remains idle for a long period is it advisable to open the emptying

connection pipe and to drain off the water. 30

#### WHAT I CLAIM IS:—

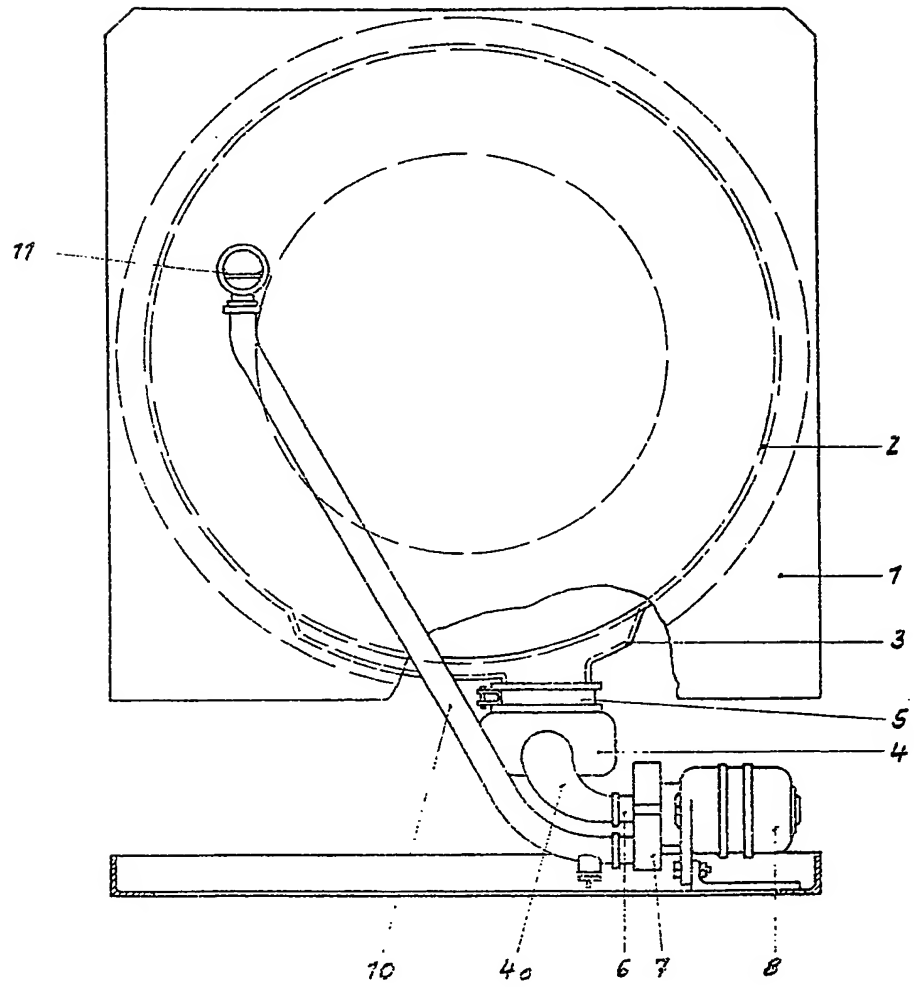
1. A washing machine comprising a pump for the suds, a filter located at the outlet from the washing drum container, and a readily detachable filter housing of rubber or like flexible material in the connection between the outlet of the washing drum container and the suds pump, said housing after being detached from the drum outlet and pulled downwards to expose the filter having a water holding capacity exceeding the contents of the riser pipe of the suds pump. 35 40

2. A machine according to Claim 1, wherein the filter housing is secured to the outlet connection of the washing drum container by means of a simple hose clip with a lever locking device so as to be readily detachable. 45

3. A washing machine substantially as hereinbefore described with reference to the accompanying drawings. 50

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Fig.1



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COMPLETE SPECIFICATION

2 SHEETS

*This drawing is a reproduction of  
the Original on a reduced scale.*

SHEETS 1 & 2

*Fig. 2*

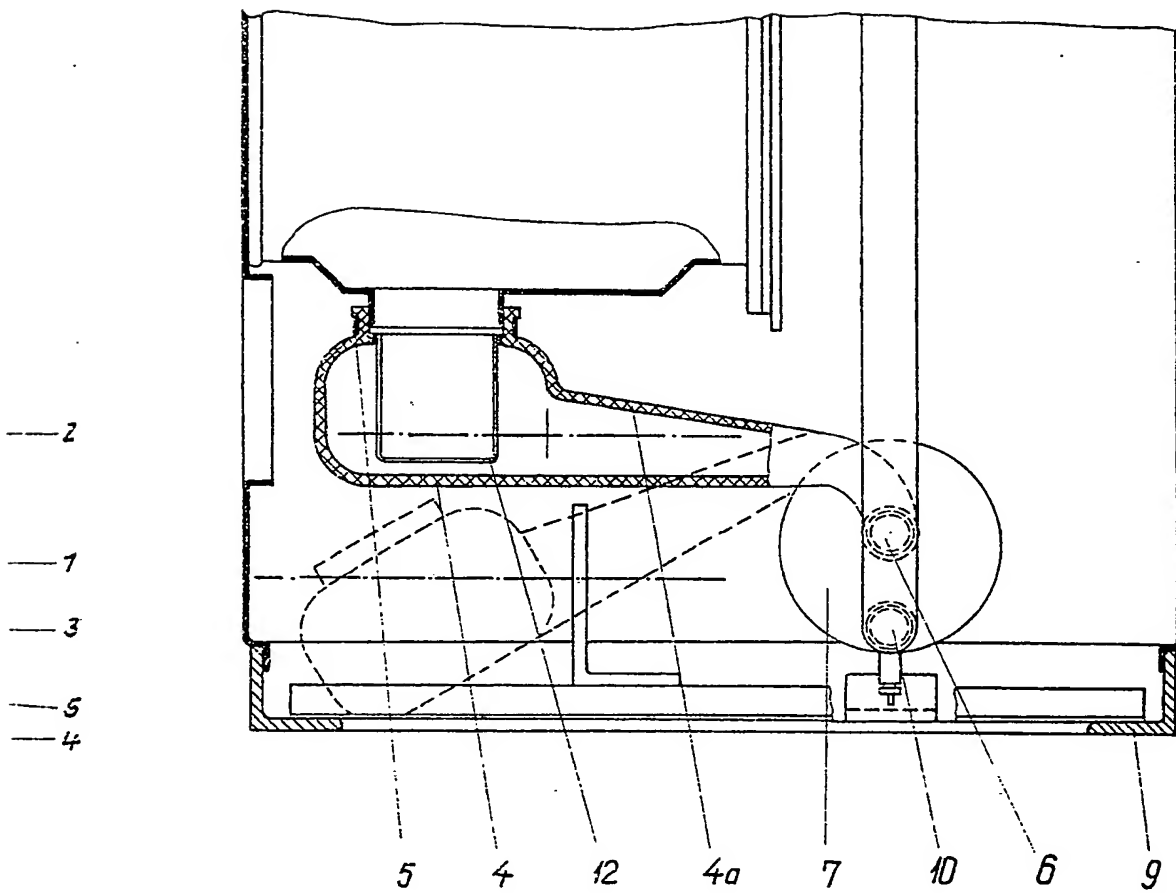


Fig.1

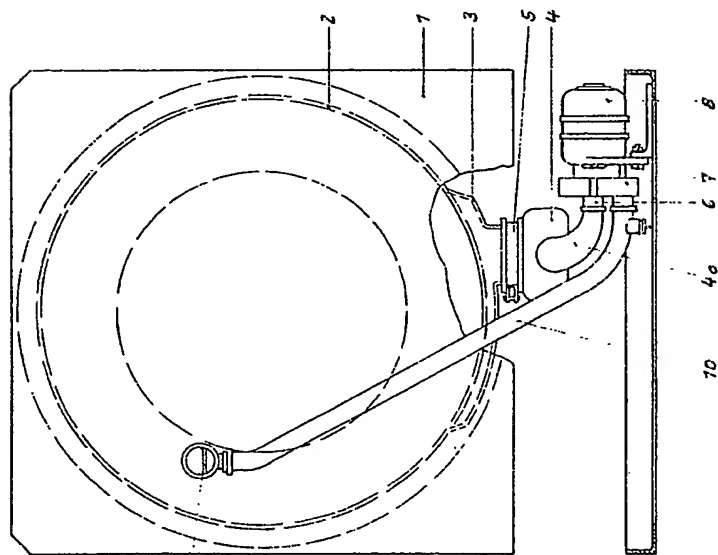


Fig. 2

